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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,694	08/23/2001	Kazutaka Takeuchi	862.1329 DII	9312

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NEW YORK, NY 10112

EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,694

Applicant(s)

TAKEUCHI ET AL.

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 69-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 69-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-26-03
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 72-75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 72, the applicant recites that the leading and trailing ends of the wound film are "butted against each other to form a butted portion", however it would appear that applicant was not in possession of the same.

More specifically, the applicant claims the invention of the embodiment depicted in Figures 42-47 (described as the thirteenth embodiment) in claim 69 which requires that the thermoplastic sheet film be wound on the columnar member at least two turns, see lines 3-6 of claim 69. The applicant is advised that it is not seen how the ends of the films can be butted together when there must be a layer of the film between the ends of the film as the film had to make at least two turns about the forming member. As such, it would appear that applicant was not in possession of the invention as now claimed in claim 72. It should be noted that claim 73 which recites that the ends of the wound film are obliquely cut to form a spiral formed butted portion is only described with the application of a single turn about the columnar member (as described with reference to Figure 27 and what appears to be the eleventh embodiment).

Likewise claims 74-75 recite specific angular relationships of the ends where claim 75 is

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specifically recited in Figure 39 (the twelfth embodiment where only a single film was wound upon the columnar member in a single turn) and in Figure 51 (the fifteenth embodiment wherein two separate films were wound about the columnar member but the film having the oblique cut therein is only wound a single turn about the mandrel) and not directly discussed with reference to the thirteenth embodiment to which claim 69 is directed. As such, it would appear that the applicant was not in possession of the claimed invention as an abutted end was only envisioned in those embodiments where a single turn of the sheet took place and not at least two turns as recited in claim 69 and as described in reference to the thirteenth embodiment.

3. Claims 72-75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not clear how one can possibly abut the ends of the film when the film was wound about the columnar member at least two turns as depicted in Figures 42-47 and described therein. Applicant is advised that one skilled in the art would not have known how to make and/or use the invention as different embodiments have been mixed together in these claims and it is not clear how one can wind the film two turns and attain an abutting end profile as described in the claims.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 72-75 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant recites in claim 72 that the leading and trailing ends are butted against one another, however it is not clear how this can be achieved as depicted in Figure 44 in the embodiment claimed where at least two turns were provided, the ends 74a and 74b are not butted together. It is not known what is meant by "butted against each other" in claim 72 (i.e. is applicant attempting to create another meaning for butted other than that which is conventional for such language). The language "butted against each other" is not clear and concise as to the relative position of the film ends.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 69, 71 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 7-205274 in view of Japanese Patent 55-57429 for the same reasons as expressed in paper no. 7, paragraph 2.

With respect to claim 71, note that the reference suggested that those skilled in the art would have provided a uniformity in the thickness of the finished assembly which was dictated by the spacing between the mandrel and the exterior mold in Japanese Patent '429. Regarding claim 76, a fluorine resin would clearly have included ptfe (polytetrafluoroethylene) which was suggested for use in forming the tubular member by both references.

8. Claim 70 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 7 further taken with Japanese Patent 5-131555 (newly cited) and Anderson (newly cited).

While the reference to Japanese Patent '429 suggested the overall operation where the plastic material which was disposed upon the form was expanded against the exterior mold to shape the same, the reference did not expressly suggest that such an pressing and shaping operation would have incorporated an internal mandrel which expanded to a greater extent than the exterior mold of the assembly in order to apply pressure during the molding operation. The reference to Japanese Patent '555 suggested that it was known at the time the invention was made to incorporate such an arrangement wherein one employed a mandrel or core having a higher thermal expansion coefficient than an exterior mold wherein a tubular member was molded by application of heat to the assembly to melt the plastic and shape the same as the plastic material was confined between the expanded interior molding member and the exteriorly disposed mold. As such would have ensured adequate pressure during the molding operation in Japanese Patent '429 (or an increase in the pressure applied to the molding material), it would have been within the purview of one having ordinary skill in the art at the time the invention was made to incorporate a core with a higher coefficient of thermal expansion than the exterior mold such that during application of heat to melt the plastic material the mandrel or core was expanded to apply pressure to the plastic during the shaping of the same against the exterior mold as suggested by Japanese Patent 5-131555 in the process as set forth above in paragraph 7 for forming a tubular member.

It should be noted that the material of the mandrel in Japanese Patent 5-131555 was a ptfe core, however those skilled in the art of molding tubular members with an expandable core which expanded as a function of application of heat due to the thermal coefficient of expansion of the material, would have understood that different materials for the core would have been

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suitable alternative to ptfe as evidenced by Anderson who suggested that the core would have been suitably formed from ptfe (Teflon) or other suitable materials including nylon, phenol formaldehyde with a sisal felt fiber, or ptfe, see column 3, lines 6-27. Note that the mandrel 1 is expanded when heat was applied in order to help shape the material disposed upon the mandrel as the resin was set during the shaping in Anderson. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a mandrel made from a material having a high coefficient of thermal expansion such as those of Anderson when shaping a material against an externally disposed mold as was performed by Japanese Patent 5-131555 in the process of making a tubular member as set forth above in paragraph 7. It should be noted that the use of an alternative material for the expanding core with heat such as those proposed by Anderson in place of the ptfe cores of Japanese Patent '555 would have been within the purview of the ordinary artisan as merely substitution of one known means for another wherein the expandable core materials both served the same purposes.

Response to Arguments

9. Applicant's arguments with respect to claims 69-76 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that the reference to Japanese Patent '274 failed to teach that those skilled in the art at the time the invention was made would have heated the entire assembly but rather would have been led to heat at the joint region only as described and thus the reference failed to teach that one skilled in the art at the time the invention was made would have included a step of connecting the leading and trailing ends of the film by heating the wound film, the columnar member, and the tubular member up to a temperature at which the wound film was

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softened. The applicant argues that there is no reason to modify the processing in Japanese Patent '274 to apply heat in the manner claimed. It should be noted that the reference to Japanese Patent '274 suggested that those skilled in the art would have desired to form a tubular film of uniform thickness.

The reference to Japanese Patent '429 was concerned with the formation of a tubular film (like Japanese Patent '274) which had uniformity in thickness along the entire film assembly. The entire assembly was placed in a furnace in order to heat all of the components and shape the film into a tubular film. As one would have clearly desired to achieve uniformity in the thickness of the finished assembly, and as the reference to Japanese Patent '429 provided an alternative means for application of heat to the seam in the film to attain uniformity in thickness, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the heat necessary to form the seam in the plastic film to render a tubular film. It should be noted that it is well settled that where, as here, two equivalents are interchangeable for their desired function, an express suggestion of the desirability of the substitution of one for the other is not needed to render such substitution obvious, In re Fout, 213 USPQ 532, In re Siebentritt 152 USPQ 618. Clearly, additionally, heating the entirety of the assembly (and not just application of heat and pressure at the seam as was performed by Japanese Patent '274) would have facilitated the formation of a tubular film having uniformity in thickness along the entire tubular film and not just in the joint region as the entire film would have been subjected to heat and pressure during assembly to uniformly shape the same. Again, another reason to employ the heat and pressure techniques of Japanese Patent '429 in Japanese Patent '274.

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Regarding the claims added by the amendment, it should be noted that it is not deemed possible to join the ends (the trailing and leading ends) in an abutting fashion in the embodiment claimed as the ends do not abut because there is a layer of film material disposed between the ends. Even in Figure 47, the leading and trailing ends 74a and 74b of the film do not butt one another, even in the bonded and assembled tubular film. Clearly, applicant is mixing embodiments in these claims without proper antecedent for the same and applicant was clearly not in possession of these inventions as now claimed.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

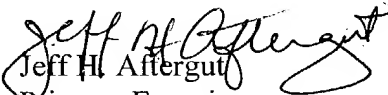
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeff H. Affergut
Primary Examiner
Art Unit 1733

JHA
February 12, 2004